

Case 2631

Ameiurus Rafinesque, 1820 (Osteichthyes, Siluriformes): proposed designation of *Silurus lividus* Rafinesque, 1820 (= *Pimelodus natalis* Lesueur, 1819) as the type species

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Abstract. The purpose of this petition is the conservation of *Ameiurus* Rafinesque, 1820 as the generic or subgeneric name for the North American bullhead catfishes by designation of an appropriate type species; the present type species makes *Ameiurus* a junior subjective synonym of *Pylodictis* Rafinesque, 1819, the established name for the flathead catfish, *P. olivaris* (Rafinesque, 1818).

1. The name *Ameiurus* Rafinesque, 1820b (p. 65), or its unjustified emendation *Amiurus* Gill, 1861a (p. 44), has long been used as a genus-group name for the North American catfishes (family ICTALURIDAE Gill, 1861), commonly called bullheads. As proposed, *Ameiurus* was one of four 'sections' of the new subgenus *Ictalurus* of *Pimelodus* Lacepède, 1803. Until the publication of the third edition of the International Code of Zoological Nomenclature in 1985, only primary subdivisions of a genus (i.e., subgenera) had standing in nomenclature, and *Ameiurus* was replaced by *Amiurus* Gill (1861a, p. 44); e.g., Taylor (1954, p. 43) and Lundberg (1982, p. 2); the spelling had previously been emended by Agassiz (1846, p. 17).

2. *Ameiurus* Rafinesque, 1820b included four species (*cupreus*, *lividus*, *melas*, and *xanthocephalus*), all described previously (Rafinesque, 1820a, pp. 50-51) in *Silurus* Linnaeus, 1758. No type species was designated for *Ameiurus*. For *Amiurus*, Gill (1861b, p. 50) stated 'Type *Amiurus catus* Gill, Syn. *Pimelodus catus* Lac.', but since *Silurus catus* Linnaeus, 1758 was not originally included in *Ameiurus* it is ineligible (*S. catus* was mentioned by Rafinesque under *Ictalurus* (p. 62), but not in the 'section' *Ameiurus* (pp. 65-66). Bleeker (1862, p. 12) followed Gill in regarding *catus* as the type species of *Ameiurus*.

3. Jordan & Copeland (1877, p. 159) listed '*Amiurus cupreus* (Raf.) Gill' first among the 21 species of *Amiurus* admitted by them; this was their method of designating the type species (op. cit., p. 134). About the same time, Jordan & Gilbert (1877, p. 87) also specified *Silurus cupreus* as type of *Ameiurus*; this is the first valid designation for the genus. In subsequent publications (e.g., Jordan & Gilbert, 1883, p. 102; Jordan & Evermann, 1896, p. 135; Jordan, 1917, p. 112, and Fowler, 1945, p. 12) *cupreus* (variously assigned to *Silurus* or *Pimelodus*) is given as type species of *Ameiurus*.

4. In the publications listed in the previous paragraph *Silurus cupreus* is indicated as being a junior synonym of *Pimelodus natalis* Lesueur (1819, p. 154). However, since Rafinesque did not preserve type specimens, the identity of *S. cupreus* depends on the interpretation of his original description (Rafinesque, 1820a, p. 51). This placed *cupreus* in the category 'Silures with an entire tail'. The rest of the description is as follows:

'*Silurus cupreus*. Yellow cat-fish. Body of an uniform coppered yellowish colour, upper jaw longer, lateral barb half the length of the head, lateral line straight, eyes elliptic, spinous rays short and smooth, anal fin with fifteen rays, tail rounded.

It is a large species, often weighing 20 lbs and sometimes 100 lbs; the fins are thick, the spinous ray of the dorsal is nearly concealed in the fleshy membrane. D.1 and 7. P.1 and 17. Abd.8. A.15. C.20.'

Taken together the three statements 'tail entire, anal fin with 15 rays, often weighing 20 lbs and sometimes 100 pounds' [45.4 kg] can apply only to *Silurus olivaris* Rafinesque, 1818 (p. 355; = *Pyloodictis limosus* Rafinesque, 1819, the type species of *Pyloodictis* by monotypy). No other ictalurid with a truncate tail weighs more than about 3.6 kg, but *Pyloodictis olivaris* commonly exceeds 50 pounds, occasionally surpasses 100, and reaches 125 lbs. (56.7 kg). The coppery yellow color, short barbels, and especially the short anal fin apply best to this species. Rafinesque's pectoral fin ray count (1 and 17) is an obvious error (one spine and 11 soft rays is usual in *P. olivaris*, one spine and 8 or 9 rays in *S. lividus* (= *Pimelodus natalis*). Rafinesque characterized the last species as having 25 anal rays, a credible count. The sole character given for *cupreus* that fits *natalis* better than *olivaris* is 'upper jaw longer'; *olivaris* usually has the lower jaw somewhat projecting (except in young), as Rafinesque noted for his *Pyloodictis limosus*. Association of the name *cupreus* with *natalis* by Jordan and his associates presumably stems from the yellow color, but this applies to individuals of both *natalis* and *olivaris*, and the latter is commonly termed 'yellow catfish'. In view of the carelessness of many of Rafinesque's descriptions, the identification of *Silurus cupreus* as *S. olivaris* (= *Pyloodictis limosus*) seems fully warranted. Unfortunately this makes *Ameiurus* (1820) a junior subjective synonym of *Pyloodictis* (1819), the established generic name for the flathead catfish.

5. A change in the familiar name for the bullheads (*Ameiurus* auct.) would cause confusion. Bullheads have a known fossil history going back at least to the Oligocene, and include several fossil and seven Recent species, most of which are widespread geographically, are important in sport fisheries, and are well regarded as food.

6. The International Commission on Zoological Nomenclature is therefore asked:

- (1) to use its plenary powers to set aside all previous designations of type species for the genus *Ameiurus* Rafinesque, 1820, and to designate as type *Silurus lividus* Rafinesque, 1820 (= *Pimelodus natalis* Lesueur, 1819);
- (2) to place on the Official List of Generic Names in Zoology the names:
 - (a) *Ameiurus* Rafinesque, 1820 (gender: masculine), type species by designation in (1) above, *Silurus lividus* Rafinesque, 1820 (a junior subjective synonym of *Pimelodus natalis* Lesueur, 1819);
 - (b) *Pyloodictis* Rafinesque, 1819 (gender: masculine), type species by monotypy *Pyloodictis limosus* Rafinesque, 1819 (a junior subjective synonym of *Silurus olivaris* Rafinesque, 1818);

- (3) to place on the Official List of Specific Names in Zoology the names:
- (a) *natalis* Lesueur, 1819, as published in the binomen *Pimelodus natalis* (valid specific name at the time of this application for the type species of *Ameiurus* Rafinesque, 1820, as a senior subjective synonym of *Silurus lividus* Rafinesque, 1820);
 - (b) *olivaris* Rafinesque, 1818, as published in the binomen *Silurus olivaris* (valid specific name at the time of this application of the type species of *Pylodictis* Rafinesque, 1819, as a senior subjective synonym of *Pylodictis limosus* Rafinesque, 1819).

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